



**MEETING SUMMARY**  
**WATER RESOURCES ADVISORY COMMISSION (WRAC)**  
**LOWER EAST COAST WATER SUPPLY PLAN (LEC Plan)**  
**TECHNICAL ISSUES WORKSHOP**  
**Fairchild Tropical Gardens - Garden House**  
**10901 Old Cutler Road, Coral Gables, FL**  
**Wednesday October 27, 2004**  
**10:00 a.m.**

**Attendees:**

**WRAC Members and WRAC Alternates:**

Harry Cronin

Daniel Hayes

Jim Reynolds

**Interested Parties:**

Bill Baxter

Donna Fries

Maria Loucraft-Manzano

Sarah Bellmund

Jamie Furgang

Linda McCarthy

Kristin Bennett

Lorraine Guise

Irene K. Quincey

Randy Brown

Richard Hamann

Roy Reynolds

Lynette Cardoch

Norm Hatch

Ingrid Rivera

Hector Castro

Jennifer Jurado

Maurice Tobon

Patrick Davis

Steve Lamb

Maria Valdes

Alexander Diaz

David Lee

Pablo Villafane

Darrell Dunn

Wayne Miller

**SFWMD Staff:**

Liz Abbott

Jim Jackson

John Mulliken

Joan Bendon

Joseph Jean-Baptiste

Rick Smith

Lehar Brion

Carlyn Kowalsky

David Swift

Scott Burns

Paula Moree

Carl Woehlcke

**1. Welcome by John Mulliken, Deputy Department Director, Water Supply Plan, SFWMD.**

Mr. Mulliken called the meeting to order at 10:05 a.m. He thanked Carolyn Lewis, Director, Fairchild Gardens, for the use of the facility. Ms. Lewis spoke of the environmental and educational activities available to members of the public that attend the tours and participate in functions at Fairchild Gardens.

Mr. Mulliken said there are regular Lower East Coast Issues Workshops and Technical Issues Workshops. Today's meeting is a technical workshop. This is an open meeting. He urged participants to ask questions and join in the discussion. Staff is here to listen to all comments.

Introductions and affiliations were stated by all stakeholders. Mr. Mulliken reviewed the agenda for today.

## 2. LEC Plan Update Process and Status, Jim Jackson, LEC Project Manager.

Mr. Jackson presented information to clarify the overall context of the LEC Plan Update Process. There are several other processes that affect the Lower East Coast Plan update.

Processes listed were: Initial CERP Update; Initial Reservation of Water; Water Supply and Environment (WSE) schedule changes; Supply Side Management Analysis; Forward Pumping; and Minimum Flows and Levels. Assumptions may change for future LEC Plan model runs.

The role of the LEC Plan update was provided.

Today's modeling discussion included 2000 Base and 2025. The purpose is to help identify and quantify the problems that the LEC Plan Update needs to address. Information on the scope, model runs, and opportunities to verify assumptions were provided.

Today's workshop is to review model assumptions; present preliminary 2000 and 2025 model runs; and to discuss and identify potential issues. Future workshops will present preliminary incremental model runs; discuss inferences from other modeling; and develop components for alternatives. Staff will report to WRAC and the Governing Board on alternatives to be considered. At the end of the year or early next year information will be provided to the Governing Board at SFWMD.

## 3. Revisions to Goal and Objectives for the LEC Plan Update, by Jim Jackson.

Mr. Jackson provided information on the revisions and provided a handout entitled "Discussion Draft". It incorporated comments received at the August 30, 2004 workshop.

Everyone was invited to send any comments or suggestions to Mr. Jackson at [jjackson@sfwmd.gov](mailto:jjackson@sfwmd.gov). Copies of all presentations made today will be posted to the SFWMD LEC website.

## 4. Supply Side Management Update, by John Mulliken.

Mr. Mulliken provided information on the update to the Supply Side Management. The changes to the allocation plan were discussed. Staff is working on bringing the changes to closure and due to past weather conditions in South Florida during the last two months, finalization has not been possible. November 18<sup>th</sup> from 3:30 p.m. – 5:30 p.m. will be the date and time for a Supply Side Management Update meeting in the B1 Auditorium at District Headquarters in West Palm Beach. Everyone was invited to attend.

## 5. Model Assumptions, Lehar Brion, Section Leader / Supervisor, Office of Modeling.

Dr. Brion presented information on the model assumptions. The objective is to provide brief descriptions of assumptions used in the proposed current base simulation and the initial LEC 2025 simulation. He thanked staff members in the Office of Modeling, and engineers in the U. S. Army Corps of Engineers, and staff in the CERP department.

The outline covered the modeling concepts and the modeling assumptions. General information on modeling and improvements was provided. Data given on the model simulations named 2000B2 and 2025I. The key assumptions (general model update) were discussed.

Information on models demonstrating cut backs was discussed by Scott Burns.

An updated topographical map; a map showing land use; a graph demonstrating the modified WSE schedule for Lake Okeechobee; and a map of the Everglades Construction Project (ECP) were all discussed along with their specific key assumptions.

Follow-up: Questions on land use on Miami-Dade County were asked, and at the next meeting staff will be available to answer those questions. The land use assumptions need to be up-to-date. Land use effects on modeling were discussed.

Information on the key assumptions for basin demand and runoff for areas in South Florida were presented. Information on minimum flows and levels (MFL) was provided. Stakeholders commented on the model assumptions for Lake Okeechobee. Information on the EAA reservoirs was given. Everglades National Park modeling results were discussed.

All water utilities suppliers were urged to provide information to staff so the wellfield pumpages information can be updated correctly. Carl Woehlcke provided input on well pumpage.

The wellfield demands for North Palm Beach, Southern Palm Beach, Broward, Miami-Dade Counties were reviewed for 2000B2 and 2025I. The "Net Change" for 2025I minus 2000B2, along with the key assumptions, was explained. The 2025I utility Aquifer Storage Recovery (ASR) was shown. A chart showing how the ASR was modeled on a monthly distribution of pumpage was provided. The key assumptions for canal operations, Everglades National Park and Florida Bay, as well as other CERP components were given.

Information on the primary differences between LEC202 and 2025I was provided.

General discussion between staff and stakeholders on the current presentation. Assumptions may have to be changed on certain model runs. The schedule for CERP

projects will be updated to accommodate the new Accer8 schedule. Further discussion on land use data updates and how that will affect the modeling results.

[Break for Lunch and tour of Fairchild Gardens]

Mr. Mulliken reconvened meeting at 1:10 pm. He announced that a USGS and SFWMD Joint Meeting will be held at SFWMD Headquarters, 3301 Gun Club Road, West Palm Beach, Florida. 1:30 p.m. on Thursday, October 28, 2004. All were invited.

Announcement: Roy Reynolds, Broward County, will retire soon and this may be his last Lower East Coast Regional Water Supply Plan meeting. He was acknowledged for his business and water management experience and it was noted he will be missed.

Another key person important to the District and water utility community, Bill Dobson, passed away recently. He was a hard working voice of reason for water management issues.

#### 6. Initial SFWMM Output: 2000 and 2025, by Lehar Brion.

Dr. Brion presented information on the model output results. The objective is to make an initial comparison of modeling output between the proposed current base simulation and the initial LEC 2025 simulation.

A chart showing the stage duration curves for Lake Okeechobee was shown, as well as a graph demonstrating the mean annual flood control releases for the 36 year (1965-2000) simulation. Information on the Lake's hydrologic performance measures between 1965-2000 simulation period was shown. The number of times the Lake's proposed minimum water level and duration criteria were exceeded during the 1965-2000 simulation was reviewed.

Presentation contained information on the agricultural and urban basin demands. Information on Lake Okeechobee and the Caloosahatchee Basin was provided. The Lake's inflows and outflows were discussed.

Charts and graphs showed information on the Lake's frequency of water restrictions for the 1965-2000 simulation period; frequency of water restrictions for the same time period; mean annual EAA/LOSA supplemental irrigation – demands & demands not met for the same time period; C-43 and C-44 basins regional irrigation supply and demand not met; annual average irrigation supplies and shortages by the Seminole Tribe (Big Cypress Reservation); and further charts and graphs on scientific data collected.

Mr. Jackson explained where the presentation material will be posted on the SFWMD website. Posting of presentations will be done on a "full slide" basis in order to facilitate viewing of the overheads. A request was made by a stakeholder to have future handouts of presentations in color. A two-page "cheat sheet", similar to Cliff notes was requested by the stakeholders to have for information in the future.

Summary of the current regional modeling for LEC Plan Update combines revised information to compare current and future scenarios, i.e. 2000B2 and 2025I. Key results from 2000B2 to 2025I were presented.

#### Discussion Session:

Stakeholder spoke on Broward County's service areas and the data collected and a request was made for better results. Mr. Mulliken provided additional information. Stakeholder comments on cutbacks in the year 2000 and request for further information and response by Mr. Mulliken. The drought of 2000-2001 was discussed, along with triggers and default values. Scott Burns presented information.

Stakeholder spoke on "trend information" and said further information is needed in order for utilities to plan ahead – SFWMD should start having in-depth meetings to break down information so they will know how to operate – how much water they are going to get and when. Mr. Mulliken said we can try different ways to provide this information. Mr. Jackson and Mr. Burns provided additional information. Stakeholder said the next 10 years are very important to Broward County and other counties in terms of water management. Mr. Burns said that perhaps an internal dialogue meeting needs to be set up to discuss how water moves around", and the stakeholder asked for more of a technical information meeting – "...how much water will be available, under what conditions, and from what project?" Mr. Mulliken provided information and said staff will follow-up on that request.

#### 7. Water Supply Performance in 2025, Carl Woehlcke, Lead Economist, Water Supply.

Mr. Woehlcke presented information on the first look at urban and agricultural water supply results in the 2000B2 and initial 2025I. The goal is to summarize urban and agricultural water supply results from 2000 base and initial 2025 run. To understand demand factors contributing to performance changes and to provide a quick overview of the 2025 results compared to the LEC Plan results for 2020.

The runs which will be evaluated in the LEC Plan Update for base and alternatives were reviewed. The runs presented at the meeting covered the water management model runs for the 2000 base results; and the terminal year results (2025) initial run.

Information on the performance goals and the model basis was provided.

A chart showing the Lake Okeechobee Service Area demands and demands not met was reviewed. The key assumptions regarding increased demands in the Caloosahatchee Basin were provided. Change factors for demands in the Lake Okeechobee Service Area were shown.

The Lake's service area water supply performance for the 2000 base and the initial 2025 was provided on a chart.

The presentation contained information on withdrawal demands by source in millions of gallons per day. Pumpage for utilities affected by permit constraints in 2025I were Seacoast Utilities, Riviera Beach, Highland Beach, Lantana, Hillsboro Beach, Sunrise, and Fort Lauderdale. Stakeholder questions and comments then took place on this section of the presentation.

Change factors for withdrawal demands by source coastal areas included the areas of Palm Beach County, Broward County, Miami-Dade County and the total Lower East Coast Surficial Pumpage.

Information on the number of years with water restrictions caused by local triggers was presented. The number of times coastal water restriction triggers were triggered was provided. The factors affecting the coastal water restrictions caused by local triggers was explained.

The preliminary comparison of initial 2025 to LEC Plan Performance in the Lake Okeechobee Service Area and the Lower East Coast Service Areas was provided.

Question and answer session held.

#### 8. Environmental Performance in 2025, by Dave Swift, Lead Environmental Scientist, Water Supply.

Mr. Swift presented a preliminary first look at the results of performance measures. He gave a broad view of the natural area results for 2000 and initial 2025.

Presentation contained information on the score definitions used in the LEC Plan (2000). A table showing the incremental modeling results was provided.

The definition of a “performance measure” was given. The performance measures for Lake Okeechobee showed the number of time lake stages exceeded 17.0 feet for more than 50 days; exceeded 15.0 feet more than 365 days; fell below 12.0 feet more than 365 days; and fell below 11.0 feet; and the number of times the minimum flow and level criteria were exceeded.

Information on the stage duration curves for Lake Okeechobee, as well as the priority hydrologic performance measures were given. The number of times the Lake’s proposed minimum water level and duration criteria were exceeded during the 1965-2000 simulation period was discussed.

In summary, the Lake’s average stages were about 0.5 feet lower. The lower Lake stages exhibited under 2025I allows more opportunities for regeneration of littoral zone habitat. The overall score showed marginal improvement.

Presentation contained information on the Caloosahatchee and St. Lucie Estuary results. Data provided on the areas.

The Everglades "Indicator Regions" used was presented. The Everglades targets -- for most areas, is meeting Natural System Model (NSM) stage targets is the goal for the LEC Plan. Information on Everglades performance measures was given.

Information provided on the Arthur R. Marshall Loxahatchee National Wildlife Refuge (WCA-1) and WCA-2, WCA-2B, WCA-3A, WCA-3B, and Everglades National Park.

The flow transects for Everglades National Park was explained. Information on water deliveries to Everglades National Park and scores was presented.

Presentation continued with information on Biscayne Bay and the average annual total flows and average annual dry season flows.

A table showed the incremental modeling results for the LEC natural areas.

Question and answer session. Evaluation by the SFWMD Office of Counsel on Rule Development is currently being done. General comments and suggestions made by several stakeholders.

#### 9. Next Steps in LEC Plan Update.

Ms. Kowlasky thanked everyone for attending. She asked everyone to submit their comments in writing to staff.

#### 11. Adjourn at 3:20 p.m.

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Paula Moree  
Staff Business Operations Analyst  
Governing Board and Executive Services  
SFWMD

